

WHAT IS CLAIMED IS:

1. A method of controlling reverse data rates in a mobile communication system having an AN (Accesss Network) and a plurality of ATs (Acess Terminals) in one cell, 5 comprising the steps of:

calculating a total load of a reverse link by measuring a total energy of the reverse link;

calculating a load share of each AT in the total reverse link load; and

considering each of the plurality of ATs and determining that an AT reduce the reverse data rate when the load share of the AT is greater than a predetermined threshold individually selected for the AT.

10 2. The method of claim 1, further comprising the step of considering each of the plurality of ATs and determining that an AT increase the reverse data rate when the load share of the AT is less than or equal to the predetermined threshold.

15 3. The method of claim 1, wherein the plurality of ATs are considered in an ascending order of the reverse data rates of the plurality of ATs.

20 4. The method of claim 1, wherein the plurality of ATs are considered in a descending order of the service priorities of the plurality of ATs.

5. The method of claim 1, wherein the total energy includes energy included in the volume of data received from the plurality of ATs.

6. The method of claim 1, wherein the total energy includes energy from interference from adjacent cells.

5 7. The method of claim 1, wherein the total energy includes energy from thermal noise.

8. A method of controlling reverse data rates in a mobile communication system having an AN (Access Network) and a plurality of ATs (Access Terminals) in one cell, 10 comprising the steps of:

calculating a total load of a reverse link by measuring a total energy of the reverse link; calculating a load share of each AT in the total reverse link load; and considering each of the plurality of ATs and determining that an AT reduce the reverse data rate when the load share of the AT is greater than a predetermined threshold for the AT.

15 9. The method of claim 8, further comprising the step of considering each of the plurality of ATs and determining that an AT increase the data rate of data that the AT transmits when the load share of the AT is less than or equal to the predetermined threshold.

20 10. The method of claim 8, wherein the plurality of ATs are considered in an ascending order of the reverse data rates of the plurality of ATs.

11. The method of claim 8, wherein the plurality of ATs are considered in a

descending order of the service priorities of the plurality of ATs.

12. The method of claim 8, wherein the total energy includes energy included in the volume of data received from the plurality of ATs.

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13. The method of claim 8, wherein the total energy includes energy from interference from adjacent cells.

14. The method of claim 8, wherein the total energy includes energy from thermal noise.

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15. A method of controlling reverse data rates in a mobile communication system having an AN (Access Network) and a plurality of ATs (Access Terminals) in one cell, comprising the steps of:

calculating a total load of a reverse link by measuring a total energy of the reverse link;

calculating a load share of each AT in the total reverse link load;

comparing the load share of each AT with a predetermined threshold for the AT, and

determining that the AT adjust the reverse data rate according to the comparison result; and

comparing the total load of the reverse link calculated with the total reverse capacity of

20 the AN and controlling the thresholds according to the comparison result.

16. The method of claim 15, wherein the step of comparing the load share of each AT and determining that the AT adjust the reverse data rate comprises the steps of:

decreasing the reverse data rate when the load share of the AT is greater than the predetermined threshold for the AT; and

increasing the reverse data rate of when the load share of the AT is less than or equal to the predetermined threshold for the AT.

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17. The method of claim 15, wherein the step of comparing the load share of each AT and determining that the AT adjust the reverse data rate is performed in an ascending order of the reverse data rates of the ATs.

10 18. The method of claim 15, wherein the step of comparing the load share of each AT and determining that the AT adjust the reverse data rate is performed in a descending order of the service priorities of the ATs.

15 19. The method of claim 18, wherein a low service priority is given to an AT having a high service priority more than predetermined times.

20. The method of claim 15, wherein the total energy includes energy included in the volume of data received from the ATs.

20 21. The method of claim 15, wherein the total energy includes energy from interference from adjacent cells.

22. The method of claim 15, wherein the total energy includes energy from thermal

noise.

23. The method of claim 15, wherein the thresholds are determined separately for each AT.

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24. The method of claim 23, wherein the thresholds are multiplied by a variable having a value less than 1.

10 25. The method of claim 24, wherein the variable is adjusted as a function of adjustment to the thresholds.

26. The method of claim 24, wherein as the reverse link capacity for the AN approaches the total reverse capacity, the variable is decreased.

15 27. The method of claim 24, wherein the initial value of the variable is a function of the number of ATs within the cell.

20 28. The method of claim 27, wherein the initial value of the variable is set to a large value if the number of the ATs is greater than a predetermined number.

29. The method of claim 27, wherein the initial value of the variable is set to a small value if the number of the ATs is less than a predetermined number.

30. An access network (AN) in a cell for controlling reverse data rates for a plurality of ATs (Access Terminals) in a mobile communication system, comprising:

5 a data rate information generator for calculating a total load of a reverse link by measuring a total energy of the reverse link from the ATs, comparing a share of each AT in the total reverse link load with a predetermined threshold for the AT, and generating data rate information for the AT to control the data rate of the AT according to the comparison result; and

a transmitter for transmitting the generated data rate information to the AT.

10 31. The AN of claim 30, wherein the transmitter comprises a spreader for spreading the data rate information with an orthogonal code predetermined for the AT.

15 32. The AN of claim 30, wherein the data rate information generator compares the capacity of the reverse link calculated based on the determined data rate with the total reverse capacity of the AN and controlling the threshold according to the comparison result.

20 33. The AN of claim 30, wherein the data rate information generator reduces the reverse data rate when the load share of the AT is greater than the threshold, and increases the reverse data rate when the load share is less than or equal to the threshold.

25 34. The AN of claim 30, wherein the data rate information generator generates data rate information in an ascending order of the reverse data rates of the ATs.

35. The AN of claim 30, wherein the data rate information generator generates data

rate information in a descending order of the service priorities of the ATs.

36. The AN of claim 35, wherein the data rate information generator assigns a low service priority to an AT having a high service priority greater than a predetermined number of 5 times.

37. The AN of claim 30, wherein the total energy includes energy related to the volume of data received from the ATs.

38. The AN of claim 30, wherein the total energy includes energy related to interference from adjacent cells.

39. The AN of claim 30, wherein the total energy includes energy related to thermal noise.

40. The AN of claim 30, wherein a different threshold is set for each AT.

41. The AN of claim 40, wherein the threshold is multiplied by a variable less than 1.

42. The AN of claim 41, wherein the variable is adjusted as a function for controlling the threshold.

43. The AN of claim 41, wherein as the reverse link capacity for the AN approaches the total reverse capacity, the variable is decreased.

44. The AN of claim 41, wherein the initial value of the variable is a function of
5 the number of the ATs within the cell.

45. The AN of claim 44, wherein the initial value of the variable is set to a large value if the number of the ATs is greater than a predetermined number.

10 46. The AN of claim 44, wherein the initial value of the variable is set to a small value if the number of the ATs is less than a predetermined number.